



POSTOPERATIVE INTENSIVE CARE IN PREGNANT WOMEN WITH VARICOSE DISEASE USING MEDICATIONS CONTAINING DIOSMIN

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Abstract : *Chronic venous diseases of the lower extremities are widespread health issues affecting a significant portion of the population. Pregnancy is a major factor contributing to venous insufficiency in women due to the mechanical pressure exerted by the growing uterus and the hormonal changes induced by the placenta, which affect the vessel walls.*

This article examines sources from different references on how to properly use phlebotonics in postoperative intensive care.

Key words: *Varicose veins, phlebotonics, pulmonary artery thromboembolism, diosmin.*

Varicose disease of the lower limbs is the most prevalent vascular condition, impacting between 20% and 64% of people, with women being 1.5-2 times more likely to suffer from it than men. International data indicates that the rate of new cases of varicose disease in women in developed countries increases by 2.6% annually. Most specialists agree that pregnancy is a primary cause of varicose syndrome in women, leading to chronic venous insufficiency (CVI) and swelling in the lower limbs.



During surgical procedures, the vascular walls can be damaged, releasing tissue factors into the bloodstream that promote thrombosis. As a result, preventing venous thromboembolic complications (VTEC) is a critical concern in modern surgery. Despite preventive measures, VTEC occurs in 3-5% of cases following abdominal surgeries, with up to 75% of deep vein thromboses in the lower extremities remaining asymptomatic. Often, the only clinical manifestation is thromboembolism.

The main factor contributing to venous wall degeneration in pregnant women is the increased production of steroid hormones by the placenta, especially progesterone, which rises 250 times by the end of pregnancy. Under the influence of progesterone and relaxin, vein elasticity can increase by up to 150%. Consequently, venous dilation is seen in about 30% of women in the first trimester, over 50% in the second trimester, and in all cases by the third trimester. This increased venous capacity, combined with a physiological 20-30% increase in circulating blood volume, exacerbates venous hypertension. In the second half of pregnancy (around 20-22 weeks), the growing uterus compresses the iliac veins and retroperitoneal vessels, with the greatest pressure occurring by the 40th week. In certain positions, such as lying on the back or the right side, the uterus can completely obstruct the inferior vena cava. This hinders venous outflow, increasing pressure in the veins of the lower extremities and facilitating vein dilation and valve insufficiency. The compression of the iliac veins and inferior vena cava is responsible for the development of vulvar varicosis, which primarily occurs in the last trimester.

Laboratory studies have shown that coagulation system changes can persist for up to 30-35 days after surgery. The risk of thromboembolic complications remains high even in the delayed postoperative period, extending up to 91 days or more after surgery.

Currently, the prevention of venous thromboembolic complications is standard practice for all patients, and most clinical guidelines recommend the use of heparins and Diosmin-based medications to prevent thrombosis and pulmonary embolism (PE).



Diosmin, a semi-synthetic flavonoid derived from Hesperidin, is obtained through the chemical modification of the aglycone part of the flavonoid. It is metabolized in the body into diosmetin, which is absorbed, conjugated with glucuronide, and excreted in the urine. Diosmin exhibits a broad range of pharmacological effects, making it a promising agent for treating and preventing venous diseases. Despite its widespread use, the pharmacokinetics of diosmin remain insufficiently studied due to the challenges in quantifying naturally derived substances in biological fluids. Determining the half-life of diosmin is difficult due to its active metabolism and the complexities of measurement, but studies suggest a half-life of approximately 11 hours for diosmetin after a single oral dose.

"Венарус", a combination drug of Hesperidin and Diosmin in a 1:9 ratio, is produced in Russia. Unlike other formulations containing diosmin, "Венарус" ensures the predictable antioxidant and anti-inflammatory effects of Hesperidin due to its standardized dosages. Clinical studies have shown that "Венарус" significantly reduces symptoms of chronic venous insufficiency (CVI) and enhances quality of life for patients with varicose disease. It also improves endothelial function and microcirculation. "Венарус" stands out for its venotonic and venoprotective effects, offering comprehensive treatment for venous system disorders. This drug is particularly effective in improving the quality of life for patients suffering from venous insufficiency, providing pain relief and alleviating symptoms related to the condition.

Oral systemic medications are an essential component of modern postoperative intensive care and a means of improving the tolerance of the venous system of the lower limbs to adverse exogenous and endogenous factors.

Thus, in conclusion, it should be emphasized that women in the high-risk group for thromboembolic complications should undergo screening for varicose disease before a cesarean section, in order to prevent complications in a timely manner. If this has not



been done, screening should be carried out as soon as possible during the postoperative period.

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